New Claims

1. Method for the detection of analytes in a sample, where analyte-specific binders (15) are immobilized in a multitude of detection fields (5, 7) located on one of the planar faces of a disc-shaped substrate (3), then the samples are contacted with the detection fields (5, 7), and subsequently the presence and/or the quantity of the analytes (17) to be detected is (are) determined by optical evaluation of the detection fields (5,7), where a substrate (3) prepared from an optically transparent material is used, in that the detection fields (5, 7) are arranged along at least one spiral line to (27) and/or a multitude of concentric circular lines on the substrate (3) characterized in that, after contacting the sample, an optical reflecting layer (21)-the planar face of the substrate (3) which carries the detection fields (5, 7)-is applied over the detection fields (5, 7).

2. Method according to Claim 1,
characterized in that the reflecting layer (21) is made of aluminum.

3. Method according to one of Claims 1 and 2,
characterized in that, with reference to the disc axis, radially adjacent detection fields (5, 7) are arranged with radial separation.

4. Method according to one of Claims 1-3,
characterized in that, along the spiral line (27) or a circular line, adjacent detection fields (5, 7) are arranged with separation from each other.

5. Method according to one of Claims 1-4,
characterized in that, on the planar face of the substrate (3), which carries the detection fields (5, 7) along the spiral line (27), or at least along one circular line, additional data fields (9) are formed which contain data pertaining to samples and/or detection fields and/or the evaluation.

6. Method according to Claim 5,
characterized in that detection fields (5, 7) and data field (9) are arranged alternately along the spiral line (27) or along at least one circular line.

7. Method according to Claim 5,
characterized in that detection fields and data fields are each formed on separate circular lines.

8. Method according to one of Claims 5-7,
characterized in that for the formation of the data fields (9), recesses (11) are formed in the planar face of the substrate (3) which carries the detection fields (5, 7) and in that the reflecting layer (21) is applied in such a manner that it reaches into the recesses (11).

9. Method according to one of Claims 5-7,
characterized in that for the formation of the data fields, a substance which influences incident reading light is applied on the planar face of the substrate which carries the detection fields.

10. Method according to one of Claims 1-9,

characterized in that, on the planar face of the substrate (3) which carriers the detection fields (5, 7), along the spiral line (27) or along at least one circular line, at least one reference field is formed, in addition, whose optical properties are used as reference in the evaluation of the detection fields (5, 7).

11. Method according to one of Claims 1-10,
characterized in that, after contacting the sample with the detection fields (5, 7), before the application of the reflecting layer (21), a coating layer (19) made of an optically transparent material is applied on the detection fields (5, 7).

12. Method according to Claim 11,
characterized in that for the coating layer (19) a polymer-based material is used.

13. Method according to one of Claims 1-12,
characterized in that a substrate (3) made of polycarbonate is used.

14. Method according to one of Claims 1-13,
characterized in that the substrate (3) is provided at a manufacturing site with binders (15), dried and packaged, and in that the substrate (3) so prepared is then brought to an application site which is at a distance from the manufacturing site, at which application site, the sample is contacted by a user with the detection fields (5, 7).

15. Method according to one of the preceding claims,
characterized in that the detection of the analytes is carried out by a detection of a change in the optical properties of the detection fields.

16. Method according to Claim 15,
characterized in that the optical change in the detection fields is caused by isotopes, enzymes, fluorochromes, dyes, metal colloids and/or beads.

17. Method according to Claim 16,
characterized in that latex beads, plastic beads, glass beads and/or metal beads are used.

18. Support for use with the method according to one of Claims 1-17,
comprising a disc-shaped substrate (3) made of an optically transparent material, to one of whose planar sites analyte-specific binders (15) are immobilized in a multitude of detection fields (5, 7), where the detection fields (5, 7) are arranged along at least one spiral line (27) and/or a multitude of concentric circular lines on the substrate (3), characterized by reflecting layer (21) being flatly applied, over the detection fields (5, 7), on the planar face of the substrate, which carries the detection fields, after contacting the sample with the detection fields (5, 7) characterized in that, for the formation of the detection fields and after contacting the sample with the detection fields, a magnetic layer, which contains magnetic and/or magnetizable particles, is flatly applied over each planar face of the substrate which carries detection fields.

19. Support according to Claim 18,

characterized in that a protective layer (25) is flatly applied on the reflecting layer (21).

20. Support according to Claim 19,
characterized in that the protective layer (25) is made of an acrylate-based material.

21. Support according to one of Claims 18-20,
characterized in that it is made available as a packaged commercial unit, prior to the application of the reflecting layer.

22. Support according to Claim 21,
characterized in that it is packaged in the dry state.

23. Method for the detection of analytes in a sample, in which analyte-specific binders are immobilized in a multitude of detection fields on at least one of the planar faces of a disc-shaped substrate, then the sample is contacted with the measurement fields, and subsequently the presence and/or the quantity of the analytes to be determined is (are) determined by evaluation of the detection fields, where the detection fields are magnetically evaluated and, for that purpose, binders, or the analytes to be detected, are labelled with magnetic and/or magnetizable labels and the detection fields are arranged along a multitude of concentric circular lines and/or along at least one spiral line on the substrate characterized in that, for the formation of the detection fields and after contacting the sample with the detection fields, a magnetic layer, which contains magnetic and/or magnetizable particles, is flatly applied over each planar face of the substrate which carries detection fields.

24. Method according to Claim 23,
characterized in that, after contacting the sample with the detection fields, a fixation layer is applied to the detection fields.

25. Method according to Claim 24,
characterized in that the fixation layer is flatly applied on each planar face of the substrate which carries detection fields.

26. Method according to Claim 24 or 25,
characterized in that, for the fixation layer, a polymer-based material is used.

27. Use of a support according to one of Claims 18-22 in an immunoassay and/or nucleic acid hybridization assay and/or lectin-sugar assay and/or protein-nucleic acid assay.